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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,642	10/01/2001	Kenji Nagai	SIMTEK6218	3686
25776	7590	12/17/2003		EXAMINER
ERNEST A. BEUTLER, ATTORNEY AT LAW				LE, DANG D
10 RUE MARSEILLE				
NEWPORT BEACH, CA 92660			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/682,642	NAGAI, KENJI
Examiner	Art Unit	
Dang D Le	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### **Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 24 October 2003.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-30 is/are pending in the application.  
4a) Of the above claim(s) 2-9 and 20-22 is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1,10-19 and 23-30 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

13)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a)  The translation of the foreign language provisional application has been received.

14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)      4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_ .  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)      5)  Notice of Informal Patent Application (PTO-152)  
3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s)      6)  Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's argument to include claims 23-30 in Paper dated 8/2/03 is acknowledged. The restriction to those claims is withdrawn.
2. Claims 2-9 and 20-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected group, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper dated 5/22/03.

***Response to Arguments***

3. Applicant's arguments with respect to claims 1, 10-19, and 23-30 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 10-13, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moribayashi et al. (U. S. Patent No. 5,576,588) in view of Hosoya (5,823,047).

Regarding claims 1, 10-13, 16, and 17, Moribayashi et al. show all of the limitations of the claimed invention in Figures 13, 14 and 19.

Moribayashi et al. show a rotating electrical machine (Figure 19) comprised of an outer housing assembly (16) and a rotor including a rotor shaft (26) journaled therein, said rotor shaft having a drive portion extending outwardly beyond said outer housing assembly (16) for driving relation with another shaft (through gear), said outer housing assembly being comprised of a stator shell (16) closed at opposite ends thereof by first (37) and second (34) end caps, said first end cap providing an anti-friction bearing (right near 26 to support shaft 26) journaling said rotor shaft adjacent said drive portion with said drive portion extending through said first end cap (37), said first end cap having attachment means (near 28) for providing a mounting connection to a body that journals the another shaft, said stator shell carrying a plurality of permanent magnets (18), said rotor having a plurality of windings cooperating with said permanent magnets, a commutator (above brush 36) fixed to said rotor shaft at an end thereof spaced from said drive portion of said rotor shaft and in electrical communication with said rotor windings, fasteners (near 34) for affixing said end caps to each other and to opposite ends of said stator shell (below 17 in Figure 13), a brush carrier fixed to said stator shell and carrying brushes (36) cooperating with said commutator, and a ball bearing carried by said second end cap (left) for journaling the end of said rotor shaft spaced from said drive portion.

Moribayashi et al. do not use plain bearing.

Hosoya uses plain bearing (24) for the purpose of supporting the shaft rotation.

Since Moribayashi et al. and Hosoya are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use either ball or plain bearing as taught by Hosoya for the purpose discussed above.

6. Claims 14, 15, 18, 19, 23-26, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moribayashi et al. in view of Hosoya as respectively applied to claims 10 and 17 above, and further in view of Isozumi (4,897,571).

Regarding claims 14, 15, 18 and 19, Moribayashi et al. and Hosoya show all of the limitations of the claimed invention except for the stiffening ribs.

Isozumi shows the stiffening ribs (21a) for the purpose of strengthening the end cap.

Since Moribayashi et al., Hosoya, and Isozumi are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include the stiffening ribs as taught by Isozumi for the purpose discussed above.

Regarding claims 23-25, it is noted that Moribayashi et al. also show all of the limitations of the claimed invention in Figures 16 and 17.

Regarding claim 26, it is noted that Moribayashi et al. also show all of the limitations of the claimed invention in Figure 6.

Regarding claim 30, it is noted that Isozumi also shows all of the limitations of the claimed invention.

7. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moribayashi et al. in view of Hosoya and Isozumi as applied to claim 26 above, and further in view of Hefner (5,742,110).

Regarding claim 27 and 28, Moribayashi et al., Hosoya, and Isozumi show all of the limitations of the claimed invention except for the permanent magnets being formed from a high magnetic density material and the high magnetic density material comprising neodymium-iron-boron.

Hefner shows the permanent magnets being formed from a high magnetic density material and the high magnetic density material comprising neodymium-iron-boron for the purpose of increasing flux density.

Since Moribayashi et al., Hosoya, Isozumi, and Hefner are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use neodymium-iron-boron magnets as taught by Hefner for the purpose discussed above.

Regarding claim 29, it is noted that Moribayashi et al. also show the brushes being confined in an area that encompasses 90 degrees around the rotational axis of the rotor shaft in Figure 16.

8. Claims 1 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moribayashi et al. (5,481,148) in view of McMillen (4,296,343).

Regarding claims 1 and 16, Moribayashi et al. show all of the limitations of the claimed invention including a rotor shaft (26) adjacent said drive portion with said drive portion extending through said first end cap (right side of second bearing starting from left) except for fasteners for affixing said end caps to each other and to opposite ends of said stator shell and the use of plain bearing.

McMillen shows fasteners (Figure 1) for affixing said end caps (14, 16) to each other and to opposite ends of said stator shell and the use of plain bearing (22, Figure 4) for the purpose of making a complete starter motor.

Since Moribayashi et al. and McMillen are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use fasteners to connect the end caps and either ball or plain bearing as taught by McMillen for the purpose discussed above.

9. Claims 1 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moribayashi et al. (5,481,148) in view of Tomite et al. (4,707,630)

Regarding claims 1 and 16, Moribayashi et al. show all of the limitations of the claimed invention including a rotor shaft (26) adjacent said drive portion with said drive portion extending through said first end cap (right side of second bearing starting from left) except for fasteners for affixing said end caps to each other and to opposite ends of said stator shell and the use of plain bearing.

Tomite et al. show fasteners (Figure 1) for affixing said end caps (12, 13) to each other and to opposite ends of said stator shell (2) and the use of plain bearing for the purpose of making a complete starter motor.

Since Moribayashi et al. and Tomite et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use fasteners to connect the end caps and either ball or plain bearing as taught by Tomite et al. for the purpose discussed above.

10. Claims 1 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long (4,795,932) in view of Kelly et al. (6,089,112).

Regarding claims 1 and 16, Long shows all of the limitations of the claimed invention in Figures 1 and 4 except for said rotor shaft having a drive portion and said first end cap having attachment means for providing a mounting connection to a body that journals the another shaft.

Kelly et al. show said rotor shaft (23, Figure 7) having a drive portion (44) and said first end cap having attachment means (hole for shaft 48) for providing a mounting connection to a body that journals the another shaft (48) for the purpose of making a starter motor.

Since Long and Kelly et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the motor as a starter motor as taught by Kelly et al. for the purpose discussed above.

11. Claims 1 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long (4,795,932) in view of Kindl (1,472,872).

Regarding claims 1 and 16, Long shows all of the limitations of the claimed invention in Figures 1 and 4 except for said rotor shaft having a drive portion and said first end cap having attachment means for providing a mounting connection to a body that journals the another shaft.

Kindl shows said rotor shaft (6, Figure 2) having a drive portion (18) and said first end cap (4) having attachment means (7) for providing a mounting connection to a body (8 and 13) that journals the another shaft (14) for the purpose of making a starter motor.

Since Long and Kindl are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the motor as a starter motor as taught by Kindl for the purpose discussed above.

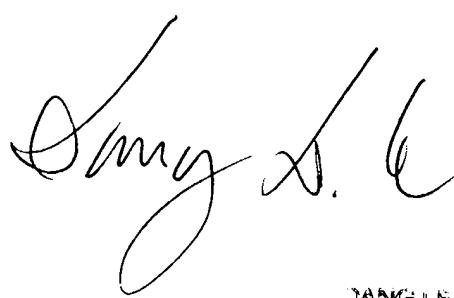
***Information on How to Contact USPTO***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (703) 305-0156. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

12/8/03



DANG D. LE  
U.S. PATENT & TRADEMARK OFFICE